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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,895	12/02/2003	Kunihiko Ishizaki	46130	2427

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EXAMINER

ASINOVSKY, OLGA

ART UNIT PAPER NUMBER

1711

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/724,895

Applicant(s)

ISHIZAKI ET AL.

Examiner

Olga Asinovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/26/04 & 9/28/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Election/Restrictions***

Applicant's election with traverse of Group I, claims 1-2 and 4-6 in the reply filed on September 28, 2005 is acknowledged. The traversal is on the ground(s) that claim 3 of Group II should be examined simultaneously with claims 1,2 and 4-6 of group I, because claims 1 and 3 are directed to a process for the continuous production of a water-absorbent resin product including the step of measuring a water-absorbent resin by its predetermined property; thus, the process of Group I and Group II are related and overlap. This is not found persuasive because the independent claim 3 discloses a process for continuous production of a water-absorbent resin product that said process in claim 3 does not include step (B) separating and step (C) mixing. Two independent claims 1 and 3 disclose different steps of a process for continuous production of a water-absorbent resin product. Thus the resulting water-absorbent resin product may have different properties.

1. The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 885 917 A2.

The claimed invention is a process for continuous production of a water-absorbent resin product comprising the steps of: (A) measuring a water-absorbent resin by its predetermined property and/or its predetermined component content, wherein the water-absorbent resin comes being continuously produced via a classification step and/or a surface-modifying step; (B) separating a predetermined amount of water-

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absorbent resin (a) from the water-absorbent resin that comes being continuously produced, wherein the water-absorbent resin (a) is a water-absorbent resin which display not less than a definite value and/or a water-absorbent resin which displays not more than a definite value as to the predetermined property and/or predetermined component content in accordance with results of the aforementioned measurement; and (C) mixing at least a portion of the aforementioned separated predetermined amount of water-absorbent resin(a) into a water-absorbent resin that comes being continuously produced via a classification step and/or a surface-modifying step on the same or another production line.

Step (A) "measuring" is not specifically limited since there is no physical characteristic of the starting water-absorbent resin; also, there is no predetermined component content.

Step (B) "separating" a predetermined amount of water-absorption resin (a) which displays "not less than a definite value" and/or a water-absorption resin which displays "not more than a definite value" can include distribution of particles size of the water-absorbent resin granule, or an absorption capacity, or a purification step, because the resulting product is not clear.

Step (C) "mixing" can include a mixing of a portion of a water-absorbent resin (a) and a surface-modified water-absorbent resin or a mixture of a surface-crosslinked water-absorbent resin having different particle size.

EP'917 discloses a water-absorbent resin granule-containing composition produced by a continuous granulation process, wherein a water-absorbent resin powder and an

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aqueous liquid are supplied into a continuous extrusion mixer, page 15, lines 31-58 and page 16, lines 1-27. The ratio between the water-absorbent resin powder and the aqueous liquids is measured since the combinations of the water-absorbent resin powder and the aqueous liquid is depending on the physical properties and the granulation strength (fracture) of the resulting product. The obtained hydrogel polymer is pulverized and then classified into a coarse particle, an objective particle, and a fine particle, page 16, lines 28-30. The coarse particle is re-pulverized and re-classified. Ep'917 discloses several steps of classifying and re-classifying of a hydrogel polymer for obtaining the desired particle size. The step of classifying particle size of the water-absorbent resin is applicants' claimed step (B) "separating" for obtaining a "water-absorbent resin which displays not less than a definite value and/or not more than a definite value". EP'917 discloses separating step wherein a fine powder portion is first separated from the water-absorbent resin and then granulated, page 20, line 51. The resultant granule is mixed with a primary particle of the water-absorbent resin, page 20, lines 56-58. The continuous granulation process produces a large particle diameter and a particle of a very small particle diameter. For the purpose of enhancing the absorption speed/capacity the particles are surface-crosslinked=surface-modified, page 16, lines 35-58. The particle of a large particle diameter (particle obtained as a primary particle) is only its surface crosslinked, whereas the fine particle is crosslinked up to its inside, page 21, lines 45-50. EP'917 discloses a mixture of a surface-crosslinked product of a water-absorbent resin primary particle and a surface-crosslinked product of a water-absorbent resin granule, page 33, lines 45-46, for the present step (C) in the instant

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claim 1. The ratio by weight of the water-absorbent resin primary particle to the water-absorbent resin granule is in the range of 95/5 to 40/60, page 33, lines 56-57, for the present claims 4-5 for the predetermined property and/or predetermined component content.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 885 917 A2 as applied to claims 1-2 and 4-5 above, and further in view of Uenaka et al U.S. Patent 5,468,813 or Imahashi U.S. Patent 6,107,385.

The primary reference to EP'0885 917 A2 does not disclose the technique for measuring particle diameters by a laser diffraction scattering method.

Uenaka'813 and Imahashi'385 disclose a laser diffraction scattering method for measuring a particle diameter of 0.3 to 7 microns in Uenaka, column 2, lines 35-37 and of 0.4 to 2 microns in Imahashi, column 4, lines 4-5.

It would have been obvious to one of ordinary skill in the art to use a laser diffraction scattering method as disclose in Uenaka invention or Imahashi for measuring the particle diameter of water-absorbent resin in EP'0 88 917 because said laser diffraction

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scattering method can be used for measuring a particle diameter of any organic or inorganic particles.

***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art has been considered.

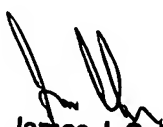
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky  
Examiner  
Art Unit 1711

  
November 23, 2005

  
James J. Seidleck  
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